```
-136
                   AGAAGTGATGCCACTTGGTTAAGGTCCCAGAGCAGGTCAGAATCAGACCTAGGATCA    -80
-79 GAAACCTGGCTCCTGGCTCCCTACTCTTCTAAGGATCGCTGTCCTGACAGAAGAACTCCTCTTTCCTAAA    -1

  1 ATG GAG TCG AGT AAA AAG ATG GAC TCT CCT GGC GCG CTG CAG ACT AAC CCG CCG CTA AAG    60
  1  M   E   S   S   K   K   M   D   S   P   G   A   L   Q   T   N   P   P   L   K     20

 61 CTG CAC ACT GAC CGC AGT GCT GGG ACG CCA GTT TTT GTC CCT GAA CAA GGA GGT TAC AAG   120
 21  L   H   T   D   R   S   A   G   T   P   V   F   V   P   E   Q   G   G   Y   K     40

121 GAA AAG TTT GTG AAG ACC GTG GAG GAC AAG TAC AAG TGC GAG AAG TGC CAC CTG GTG CTG   180
 41  E   K   F   V   K   T   V   E   D   K   Y   K   C   E   K   C   H   L   V   L     60

181 TGC AGC CCG AAG CAG ACC GAG TGT GGG CAC CGC TCC TGC GAG AGC TGC ATG GCG GCC CTG   240
 61  C   S   P   K   Q   T   E   C   G   H   R   S   C   E   S   C   M   A   A   L     80

241 CTG AGC TCT TCA AGT CCA AAA TGT ACA GCG TGT CAA GAG AGC ATC GTT AAA GAT AAG GTG   300
 81  L   S   S   S   S   P   K   C   T   A   C   Q   E   S   I   V   K   D   K   V    100

301 TTT AAG GAT AAT TGC TGC AAG AGA GAA ATT CTG GCT CTT CAG ATC TAT TGT CGG AAT GAA   360
101  F   K   D   N   C   C   K   R   E   I   L   A   L   Q   I   Y   C   R   N   E    120

361 AGC AGA GGT TGT GCA GAG CAG TTA ACG CTG GGA CAT CTG CTG GTG CAT TTA AAA AAT GAT   420
121  S   R   G   C   A   E   Q   L   T   L   G   H   L   L   V   H   L   K   N   D    140

421 TGC CAT TTT GAA GAA CTT CCA TGT GTG CGT CCT GAC TGC AAA GAA AAG GTC TTG AGG AAA   480
141  C   H   F   E   E   L   P   C   V   R   P   D   C   K   E   K   V   L   R   K    160

481 GAC CTG CGA GAC CAC CAC GTG GAG AAG GCG TGT AAA TAC CGG GAA GCC ACA TGC AGC CAC TGC   540
161  D   L   R   D   H   H   V   E   K   A   C   K   Y   R   E   A   T   C   S   H   C    180

541 AAG AGT CAG GTT CCG ATG ATC GCG CTG CAG AAA CAC GAA GAC ACC GAC TGT CCC TGC GTG   600
181  K   S   Q   V   P   M   I   A   L   Q   K   H   E   D   T   D   C   P   C   V    200
```

FIG. 1A

601 GTG GTG TCC TGC CCT CAC AAG TGC AGC GTC CAG ACT CTC CTG AGG AGC GAG GGG ACA AAC 660
201 V   V   S   C   P   H   K   C   S   V   Q   T   L   L   R   S   E   G   T   N 220

661 CAG CAG ATC AAG GCC GAG GCC AGC TCC GCC GTG CAG CAC GTC AAC CTG AAG CTG GAG 720
221 Q   Q   I   K   A   E   A   S   S   A   V   Q   H   V   N   L   K   L   E 240

721 TGG AGC AAC TCG GAA AAG AAG GTT TCC TTG TTG CAG AAT GAA AGT GTA GAA AAA AAC 780
241 W   S   N   S   E   K   K   V   S   L   L   Q   N   E   S   V   E   K   N 260

781 AAG AGC ATA CAA AGT TTG CAC AAT CAG ATA TGT AGC TTT GAA ATT GAG ATT GAG AGA CAA 840
261 K   S   I   Q   S   L   H   N   Q   I   C   S   F   E   I   E   I   E   R   Q 280

841 AAG GAA ATG CTT CGA AAT AAT GAA TCC AAA ATC CTT CAT TTA CAG CGA GTG ATA GAC AGC 900
281 K   E   M   L   R   N   N   E   S   K   I   L   H   L   Q   R   V   I   D   S 300

901 CAA GCA GAG AAA CTG AAG GAG CTT GAC AAG GAG ATC CGG TCC TTC CGG CAG AAC TGG GAG 960
301 Q   A   E   K   L   K   E   L   D   K   E   I   R   S   F   R   Q   N   W   E 320

961 GAA GCA GAC AGC ATG AAG AGC GTG GAG TCC CTC CAG AAC ACA GGC CTG ACC GAG CTG GAG 1020
321 E   A   D   S   M   K   S   V   E   S   L   Q   N   T   G   L   T   E   L   E 340

1021 AGC GTG GAC GAC AAG AGC GCG GGG CAA GTG GCT CGG AAC ACA GGC CTG CTG GAG TCC CAG CTG 1080
341 S   V   D   D   K   S   A   G   Q   V   A   R   N   T   G   L   L   E   S   Q   L 360

1081 AGC CGG CAT GAC CAG ATG CTG AGT GTG CAC GAC ATC CGC CTA GCC GAC ATG GAC CTG CGC 1140
361 S   R   H   D   Q   M   L   S   V   H   D   I   R   L   A   D   M   D   L   R 380

1141 TTC CAG GTC CTG GAG ACC GCC AGC TAC AAT GGA GTG CTC ATC TGG AAG ATT CGC GAC TAC 1200
381 F   Q   V   L   E   T   A   S   Y   N   G   V   L   I   W   K   I   R   D   Y 400
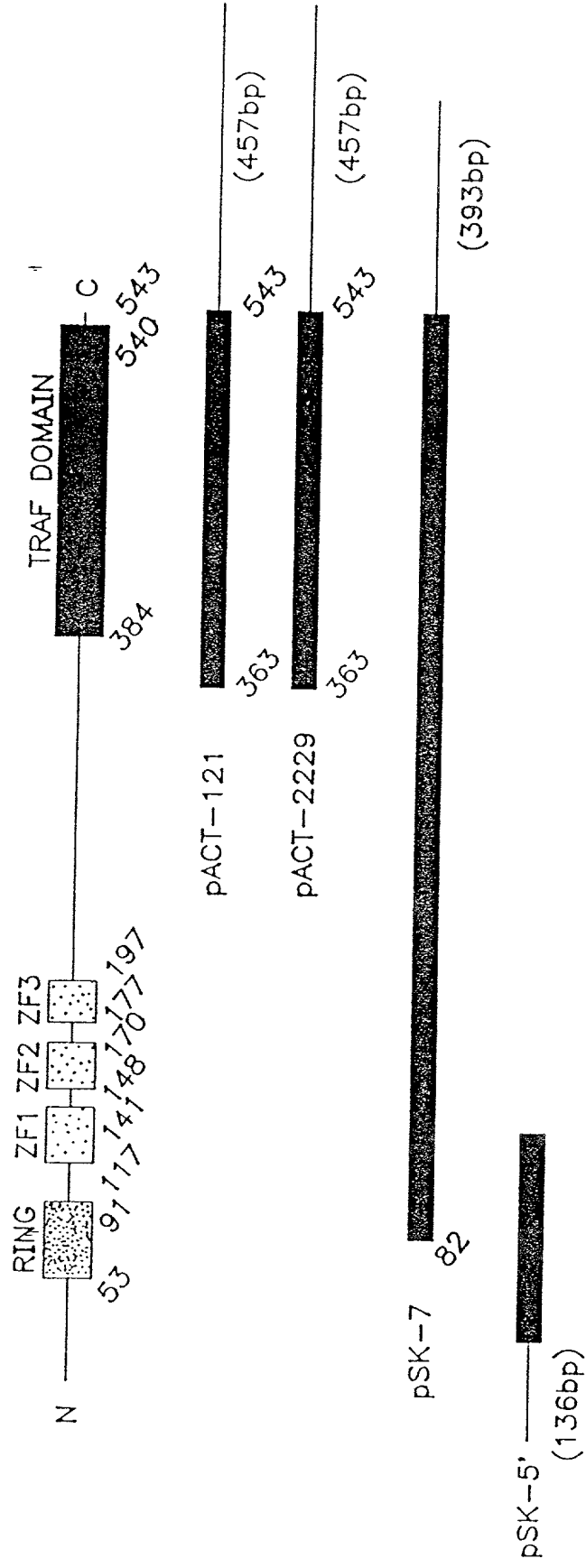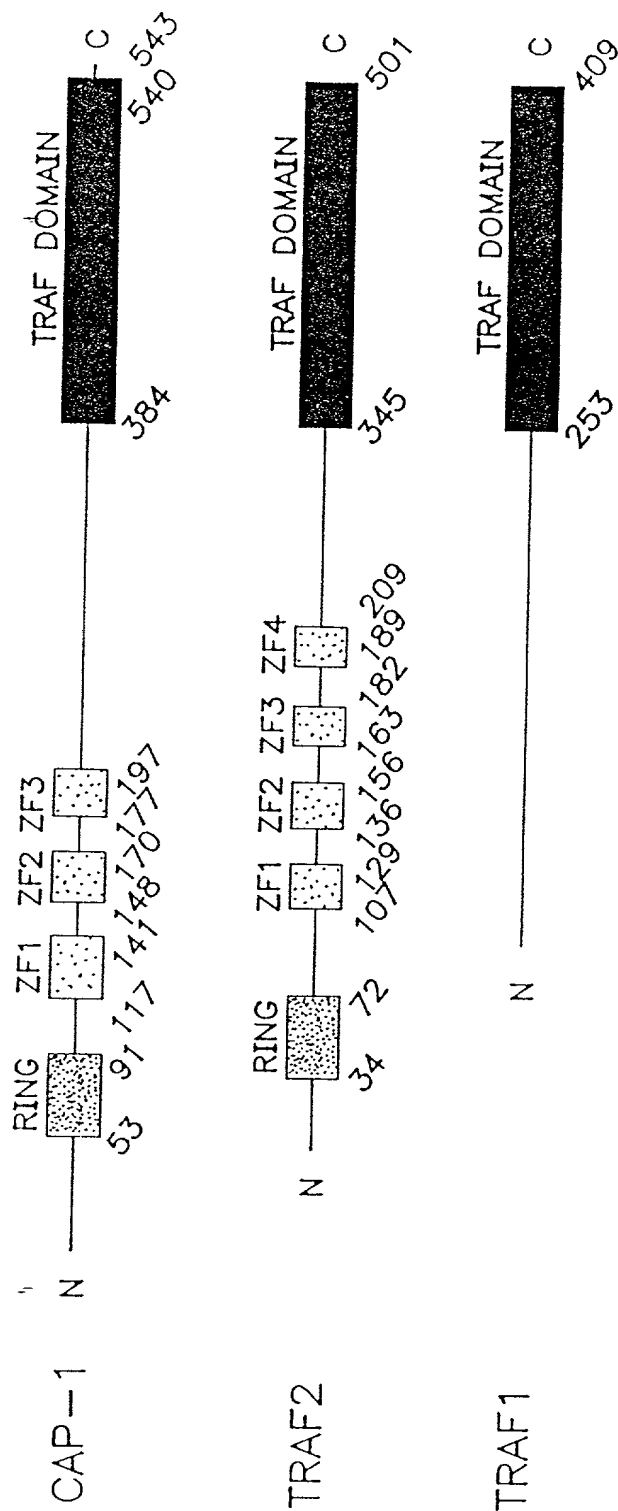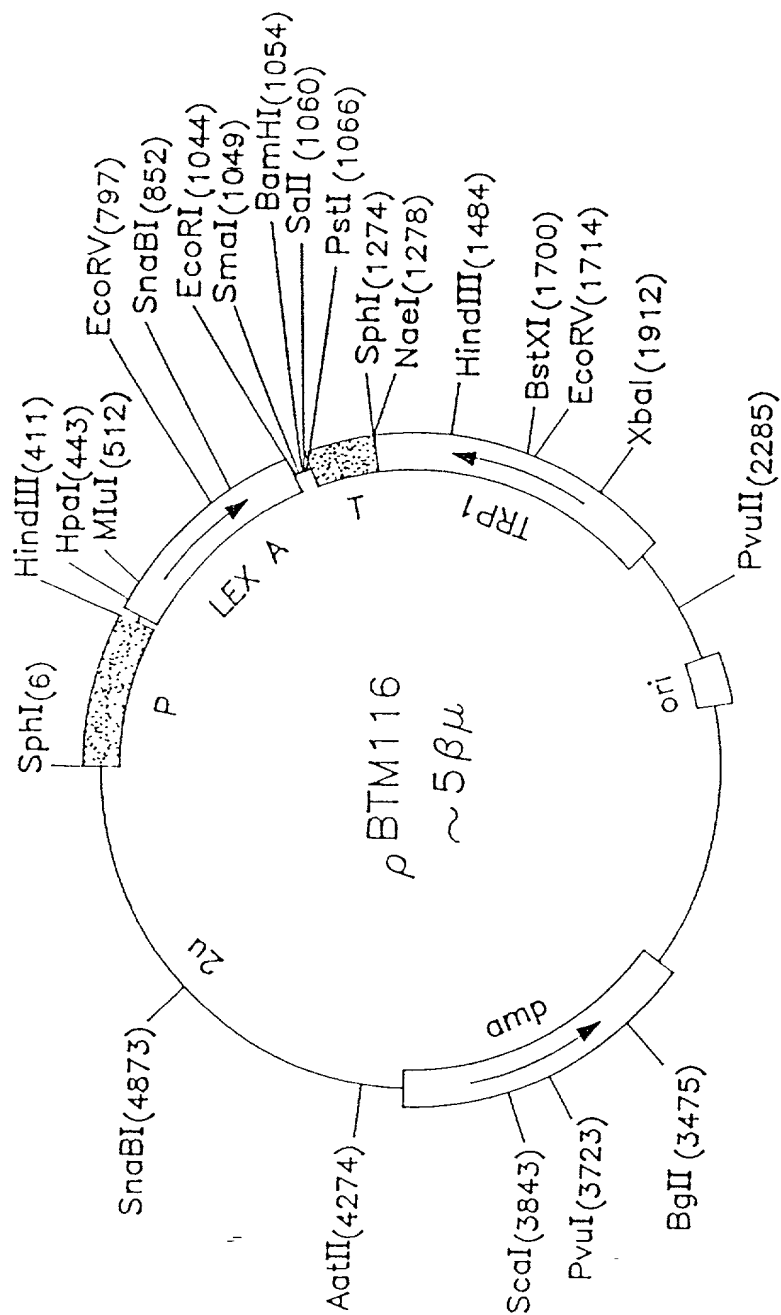
FIG. IB

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1201 AAG CGG CGG AAG CAG GAG GCC GTC ATG GGG AAG ACC CTG TCC CTT TAC AGC CAG CCT TTC 1260
401   K   R   R   K   Q   E   A   V   M   G   K   T   L   S   L   Y   S   Q   P   F  420

1261 TAC ACT GGT TAC TTT GGC TAT AAG ATG TGT GCC AGG GTC TAC CTG AAC GGG GAC GGG ATG 1320
421   Y   T   G   Y   F   G   Y   K   M   C   A   R   V   Y   L   N   G   D   G   M  440

1321 GGG AAG GGG ACG CAC TTG TCG CTG TTT TTT GTC ATC ATG CGT GGA GAA TAT GAT GCC CTG 1380
441   G   K   G   T   H   L   S   L   F   F   V   I   M   R   G   E   Y   D   A   L  460

1381 CTT CCT TGG CCG TTT AAG CAG AAA GTG ACA CTC ATG GAT CAG CAG GGG TCC TCT CGA     1440
461   L   P   W   P   F   K   Q   K   V   T   L   M   D   Q       Q   G   S   S   R  480

1441 CGT CAT TTG GGA GAT GCA TTC AAG CCC GAC CCC AAC AGC AGC TTC AAG AAG CCC ACT     1500
481   R   H   L   G   D   A   F   K   P   D   P   N   S   S   F   K   K   P       T  500

1501 GGA GAG ATG AAT ATC GCC TCT GGC TGC CCA GTC TTT GTG GCC CAA ACT GTT CTA GAA AAT 1560
501   G   E   M   N   I   A   S   G   C   P   V   F   V   A   Q   T   V   L   E   N  520

1561 GGG ACA TAT ATT AAA GAT GAT ACA ATT TTT ATT AAA GTC ATA GTG GAT ACT TCG GAT CTG 1620
521   G   T   Y   I   K   D   D   T   I   F   I   K   V   I   V   D   T   S   D   L  540

1621 CCC GAT CCC TGA TAAGTAGCTGGGGAGGTGGATTTAGCAGAAGGCAACTCCTCTGGGGGATTTGAACCGGTCTGTC 1696
541   P   D   P   *                                                                543

1697 TTCACTGGAGTCCTCGCGCTCAGAAAAGGACCTTGTGAGACGGAGGAGGAAGCGGCAGAAGGCGGCGCGTGCCGGCGGGAG 1775
1776 GAGCCACGCGCTGAGACGCGTGTCAGAGAAGGTTTTCATTTTTAAAGATGAGCAGTTTATAATAGACTAGCCACACTCACTTCACTCTGAAGAATTATTTATCCTTCAACA 1854
1855 AGCATAAATATTGCTGTGTCAGAGAAGGTTTTCATTTTTCATTTTTCCTTAAACTTGAACACCAAAAACACACACACACACACACGTGGGGATAGC 1933
1934 TAAACAAAGAAACATGATTTTCTTCCTTAAACTTGAACACCAAAAACACACACACACACACACGTGGGGATAGC 2012
2013 TGGACATGTCAGCATGTTAAGTAAAAGGAGAATTTATGAAATAGTAATGCAATTCTGATATCTTTCTTTCTAAAATTCAA 2091
2092 GAGTGCAATTTTG 2104
```

FIG. IC

FIG. 2

CAP-1

N | RING ZF1 ZF2 ZF3 ─────── TRAF DOMAIN ─ C
53 91 117 141 148 170 177 197   384   540 543

TRAF2

N | RING ZF1 ZF2 ZF3 ZF4 ─── TRAF DOMAIN ─ C
34 72 107 129 136 156 163 182 189 209   345   501

TRAF1

N ──────────────── TRAF DOMAIN ─ C
253   409

FIG. 3

POLYLINKER READING FRAME:

EcoRI ___ SmaI ___ BamHI ___ SalI ___ PstI

GAA TTC CCG GGG ATC CGT CGA CCT GCA G

FIG. 4